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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,066	04/14/2004	Peter Schwarz	2322.70253	6070

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CHICAGO, IL 60606

EXAMINER

VALENTIN, JUAN D

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/824,066	Applicant(s) SCHWARZ, PETER	
	Examiner Juan D. Valentin II	Art Unit 2877	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

1. The following guidelines illustrate the preferred layout for the specification of a utility application. Applicant is asked to follow these guidelines, and submit a substitute specification with the proper corrections.

### Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. *Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading.* If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

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- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

### *Claim Objections*

2. The claims are replete with antecedent basis issues, there is insufficient antecedent basis for the limitations in these claims. Applicant is asked to please carefully

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2 & 20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2 & 20 discloses “preferably” performing a said function. This statement is indefinite, and does not further add patentable weight to the claimed limitation. Either the angles are variable or they aren’t, or stating something is movable or it is not, stating that something is preferable does not further limit the claim. Examiner is further confused by the wording of claim 2 and does not fully understand what exactly is being claimed. The applicant has not defined what “a geometrical connecting axis”, applicant is asked to please point on where in the specification this said arrangement is defined and further explained. For the purposes of examination, examiner is going to interpret the claim to mean that the angles of measurement between the light sources and detectors are variable.
4. Regarding claims 6, 15, 18, the phrase "and the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "and the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).
5. Claim 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant discloses a travel measurement means, but does not disclose that the device moves relative to the measurement surface at all, and further in what manner is that movement

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carried out. The claim will be examiner to the best of the examiners understanding of the claim in view of the specification.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-18, 20, 21, 21, 25-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Wiles et al. (USPN '964 B2, hereinafter Wiles) in view of Eidelman et al. (USPN '734 B1, hereinafter Eidelman).

**Claims 1, 4-11, 13-17**

Wiles in conjunction with Fig. 3, discloses a device for determining the properties of surfaces having at least one first radiation means 26 having at least one radiation source which directs substantially collimated radiation at a predetermined angle towards a measurement surface, at least one second radiation means 12a having plurality (claim 4, col. 3, lines 55-61) of one radiation source which projects substantially non-collimated radiation onto the measurement surface, at least one radiation detector means 20 which captures at least a portion of the radiation reflected and/or diffused off the measurement surface and emits at least one measurement signal which is characteristic of the reflected and/or diffused radiation (claims 13-18, col. 3, line 49-col. 5, line 12, col. 5, line 64-col.. 7, line 24).

Wiles substantially teaches the claimed invention except that it fails to show the use of a mounted (claims 7-8) diffuser (claims 5 & 6) and the space above the measurement surface has substantially radiation-absorbing properties (claim 10). Eidelman shows that it is known to provide the space above the measurement surface has substantially radiation-absorbing properties and to use a diffuser mounted (Fig. 6, ref. 60, claims 7-8) at a particular angle that is variable between the plurality of light sources used (col. 14, line 66-col. 15, line 3, col. 19, line 65-col. 20, line 10, col. 20, line 66-col. 21, line 22, col. 22, lines 43-61) for an semiconductor manufacturing inspection apparatus. It would have been obvious to someone of ordinary skill in the art to combine the device of Wiles with the light diffuser and light absorbing housing properties of Eidelman for the purposes of providing diffuse lighting and minimizing of internal light reflections inside the housing (Eidelman, col. 22, lines 50-61).

#### **Claim 2**

Wiles as applied above further discloses wherein the angles of illumination and collection can be varied (col. 4, lines 19-51).

#### **Claim 3**

Wiles discloses the claimed invention except for the distance of the light source to the measurement surface. It is inherent to someone of ordinary skill in the art at the time of the invention was made to find the optimum distance between the light source and measurement surface, since it has been held that discovering an optimum value or workable range of a result effective variable involves only routine skill in the art.

#### **Claim 12**



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It is the position of the Office that even though the reference of Wiles does not specifically disclose a circular or ellipsoid surface above the measurement surface, it does outline the importance of housing (col. 6, lines ). In light of the applicants disclosure, there is no critically distinguishing (name characteristic or whatever) feature in the applicants disclosure that exemplifies novelty over prior art disclosure. Therefore producing the same results as the applicants limitation, therefore the reference of Ref. A reads on applicants claimed limitation.

**Claim 20**

Wiles as applied above discloses a movable optical assembly over the inspection surface (col. 6, lines 57-61).

**Claims 21, 22, 25**

Wiles as applied above discloses at least one travel measurement means (col. 6, line 57- col. 7, line 7).

**Claims 26-29**

The method is taught by the functions set forth with regards to the apparatus claims 1 & 25 as rejected above in view of Wiles in view of Eidelman.

7. Claims 19, 23, 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Wiles in view of Eidelman and further in view of Schwarz (USPN '248 B1).

**Claims 19, 23, 24**

Wiles substantially teaches the claimed invention except that it fails to show a thickness measuring device. Schwarz shows that it is known to provide an aperture (claim 19, Fig. 1, ref. 4) with a first lighting means and a thickness-measuring device (claims 23, 24) for an

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semiconductor manufacturing inspection apparatus. It would have been obvious to someone of ordinary skill in the art to combine the device of Wiles with the light aperture (shutter) and a thickness measuring device of Schwarz for the purposes of providing thickness measurements of coatings located on a substrate (Eidelman, col. 22, lines 50-61).

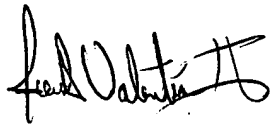
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan D. Valentin II whose telephone number is (571) 272-2433. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Juan D Valentin II  
Examiner 2877  
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December 5, 2006



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